Appendix F: Vendor Specific DBMS Considerations

This appendix contains information that is vendor DBMS specific. It will be updated as COTS versions change, or as other vendor DMBS products are supported.

F.1 Oracle RDBMS Segmentization

F.1.1 Oracle Server Segment

This section contains information specific to the Oracle Server Segment and to application segments that are written for the Oracle RDBMS.

Oracle DBMS Server Segment

The Oracle DBMS services segment contains the executables for the RDBMS, and the SQL*Net network. It also contains the core database instance: Database files, tablespaces, and internal Oracle data structures (data dictionary, etc.) that are used in common by all databases within the DBMS. Finally, this segment has the tools used by database administrators to administer the DBMS and databases.

Core database configuration	Tablespaces for System, Rollback Segments, Temporary, Tools and Users
	Log file archiving turned off
Data dictionary	Core data dictionary objects
	Support objects for performance monitoring
	Support objects for stored packages
DBA account	Operating System 'dba' account group
	'dbadmin' account in 'dba' group
	DB Admin. only
	No ownership or direct connection

Table F-1: DBMS Server Configuration

The Oracle DBMS server segment is built in the following manner. Executables are loaded using Oracle's installer. Then the core database is built based on the aggregate sizing information provided by developers. Once the database is created, the data dictionary is loaded. The data dictionary load includes the core objects required for the DBMS to function, additional items to ease DBA tasks,

and packages and procedures that allow developers to use the features of Oracle 7.

Log file archiving is turned off in the initial DBMS configuration. This allows applications' database segments to be installed and their data loaded without generating massive numbers of useless log files. Once a site's configuration is completely loaded, the DBA at that site must turn archive logging on in order to support DBMS recovery.

The last component of the core database segment is a model database administrator account named 'oradba.' This is a Unix account that has the privileges needed for database administration. The 'oracle' account that owns the executables is a special Solaris account without login capability. No user can connect to 'oracle' directly. You must login as 'root' and then connect to the 'oracle' account.

Oracle Server Tools Segment

The Oracle Server Tools segment contains the development and runtime executables for Oracle's CDE. Included in this segment are Oracle*Forms and Oracle*Reports.

Executables	SQL*Forms 3.0, Sql*ReportWriter 1.1
	Oracle*Forms 4.0, Oracle*Reports 2.0
Database objects	Data objects for each executable
	Stored packages and procedures for each executable

Table F-2:. Oracle Server Tools

Oracle DBA Tools Segment

The Oracle DBA Tools segment contains the executables that support the database administrator and are not part of the DBMS Server Segment.

Executables	Server Manager 1.0
Database objects	Data objects for each executable
	Stored packages and procedures for each executable

Table F-3: Oracle DBA Tools

F.1.2 Oracle Client Services Segment

The Oracle client services segment is loaded on each application server. It contains the runtime applications provided by Oracle (e.g. SQL*Forms 'runform') and the client portion of SQL*Net. There are different application server segments for the Solaris and HP workstations because these Oracle Tools differ due to their varying display and keyboard configurations.

F.1.3 Oracle Application Services Segments

DBS_files Directory

The `DBS_files` directory in an Oracle database segment must be owned by `oracle` in group `dba`. The change of ownership must occur before the CREATE TABLESPACE command is issued.

Oracle Database Roles

An Oracle role is a set of privileges that can be granted to users or to other roles. An Oracle user can have multiple active roles or can have some roles active while others are inactive.

F.2 Sybase RDBMS Segmentization

F.2.1 Sybase Server Segment

Sybase DBMS Server Segment

The Sybase DBMS services segment contains the executables for the RDBMS, network services and the core database instance. The default owner and database administrator is the 'sa' account. The password of the sa account must be changed after the server segment is installed.

F.2.2 Sybase Client Services Segment

Sybase Client Services Segment

The Sybase client services segment is loaded on each application server. It contains the Sybase client executables. It also has the interfaces file.

F.2.3 Sybase Application Services Segments

Sybase Database Groups

A group is a collection of users. Users within a database can only belong to one group at a time.

F.3 Synonyms

The Oracle RDBMS provides synonyms as alternate names for tables, views or other database objects. Private synonyms are user-owned aliases. Public synonyms are system wide aliases.

Developers shall not use Oracle Public Synonyms to identify data tables or views. Public Synonyms belonging to one segment may now, or in the future, conflict with object names belonging to other applications or to the DBMS. Applications should reference objects using full object specifications (owner.table.column).